

# Corporate Entrepreneurship Performance: Slovenia and Romania

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Entrepreneurship development is an imperative agenda for the improvement of competitiveness of current and future EU member countries. Corporate entrepreneurship activities and orientations can be considered important predictors of organizational performance. Hypotheses on the relationship between corporate entrepreneurship (organizational-level entrepreneurial behaviors) and performance elements and between alliance and corporate entrepreneurship elements were developed and tested. The analyses were done by using questionnaire data collected in two countries: Slovenia and Romania. Findings indicated very minor differences in corporate entrepreneurship and alliance item means between the two countries. Innovation in products and services can be considered crucial for performance of firms and economic growth. Strategic alliance relationships can be important for corporate entrepreneurship development.

*Key words:* corporate entrepreneurship, performance, alliances, Slovenia, Romania

## Introduction

Entrepreneurship development is an imperative agenda for the improvement of competitiveness of current and future European Union (EU) member countries. The focus of this study is corporate entrepreneurship (i.e. entrepreneurship at the level of an existing firm). Corporate entrepreneurship activities and orientations can be considered important predictors of organizational performance. While past corporate entrepreneurship research in North America (for example, Covin and Slevin 1986; Covin 1991; Zahra 1991; 1993;

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Zahra and Covin 1995) provided substantial evidence on the corporate entrepreneurship-performance relationship, empirical research on this relationship in new or future EU accession countries has been rare and is mainly concentrated in works of Antoncic and associates (Antoncic and Hisrich 2000; 2001; 2004; Antoncic and Zorn 2004) in Slovenia – a relatively newer EU country (a new EU country at the time of the study). This study extends the study of corporate entrepreneurship-performance relationship to a new EU member country (a prospective EU member country at the time of the study) – Romania, by making a comparison with Slovenia. This study is exploiting a research opportunity to assess the role of entrepreneurship – in this case corporate entrepreneurship – in firm performances that were brought with the shift from socialism to market-based systems in Central and Eastern Europe, as advocated by Hills and LaForge (1992).

A significant amount of research has been conducted including two groups of corporate entrepreneurship antecedents: factors of the firm's external environment (e.g., Miller 1983; Khandwalla 1987; Covin and Slevin 1991; Zahra 1991; 1993; Badguerahanian and Abetti 1995; Antoncic and Hisrich 2000; 2001; 2004) and organizational-level internal factors (e.g., Souder 1981; Schollhammer 1982; Kanter 1984, Pinchot 1985; Luchsinger and Bagby 1987; Antoncic and Hisrich 2000; 2001; 2004). This research, with the exception of Antoncic and Hisrich (2004), failed to recognize that corporate entrepreneurship may also be influenced by the firm's engagement in inter-organizational alliances. The present study remedies this weakness of past research by examining the relationship between alliance elements and corporate entrepreneurship.

In what follows, hypotheses on the relationship between corporate entrepreneurship and performance elements and between alliance and corporate entrepreneurship elements are developed, research methods are described, findings are presented and discussed.

### **Theory and Hypotheses**

In this paper, corporate entrepreneurship is defined as entrepreneurship within an existing organization, including emergent behavioral intentions and behaviors of an organization related to departures from the customary (Antoncic and Hisrich 2003). Even if corporate entrepreneurship can have several characteristic dimensions, such as new business venturing, product/service innovation, process innovation, self-renewal, risk taking, proactiveness, and competitive aggressiveness, this paper focuses only on the most evident cor-

porate entrepreneurship activities: new businesses, new ventures, and product and service innovation. These activities are defined as: (1) new businesses – pursuit of and entering into new businesses related to current products or markets (Rule and Irvin 1988; Zahra 1991; Stopford and Baden-Fuller 1994; Antoncic and Hisrich 2003); (2) new ventures – creation of new autonomous or semi-autonomous units or firms (Schollhammer 1981; Hisrich and Peters 1984; MacMillan et al. 1984; Vesper 1984; Kanter and Richardson 1991; Stopford and Baden-Fuller 1994; Sharma and Chrisman 1999; Antoncic and Hisrich 2003); (3) product/service innovation – creation of new products and services (Schollhammer 1982; Covin and Slevin 1991; Zahra 1993; Damanpour 1996; Burgelman and Rosenblom 1997; Knight 1997; Tushman and Anderson 1997; Antoncic and Hisrich 2003). Corporate entrepreneurship (intrapreneurship) can be differentiated from other similar concepts in management and business research, such as diversification strategy, capabilities, organizational learning and organizational innovation (a more precise description of this differentiation and the corporate entrepreneurship definition is provided in Antoncic and Hisrich 2003).

#### CORPORATE ENTREPRENEURSHIP AND PERFORMANCE

Growth and profitability are performance elements that can be considered important consequences of corporate entrepreneurship. In general, corporate entrepreneurship has been regarded an important element of successful organizations (Peters and Waterman 1982; Kanter 1984; Pinchot 1985). On the one hand, the relationship between corporate entrepreneurship and growth has received wide support in past research. Corporate entrepreneurship was found predictive of the growth of small firms (Covin 1991) and large firms (Covin and Slevin 1986; Zahra 1991; 1993; Zahra and Covin 1995). A positive corporate entrepreneurship-growth relationship was discovered for Slovenian (Antoncic and Hisrich 2001; 2004) and us established firms (Morris and Sexton 1996; Antoncic and Hisrich 2001) and health care firms (Stetz et al. 1998). On the other hand, past research on the relationship between corporate entrepreneurship and profitability produced mixed support. Corporate entrepreneurship was found to be related to the profitability of large firms (Covin and Slevin 1986; Zahra 1991; 1993; Zahra and Covin 1995), and small, medium-sized, and large firms from various industries in Slovenia, but not in the us (Antoncic and Hisrich 2001). Morris and Sexton (1996) also did not find a significant positive relationship between entrepreneurial intensity and profitability of us firms. One explana-

tion for such mixed results is that 'firms in the us are more growth oriented and value growth more than profitability than do the firms in Slovenia that may be still more survival and profit rather than growth oriented' (Antoncic and Hisrich 2001, 523). A similar positive relationship between corporate entrepreneurship and performance may be expected also for other similar countries referred to as transition economies, such as Romania. For firms in transition economies it may be particularly beneficial to exercise corporate entrepreneurship in order to ensure change and growth (Antoncic and Hisrich 2000). Romania has been going through the transition towards a market-based economic system in a similar period to that of Slovenia. When taking into consideration the economic development model based on corporate entrepreneurship (Douglas et al. 2003), Romania may be at the medium levels of economic development (GDP per capita), where strong efforts need to be made to increase all dimensions of corporate entrepreneurship. In contrast, Slovenia may be at the medium-high, where among entrepreneurial activities innovativeness becomes a key for improved performance. Hence, we would expect a general positive relationship between corporate entrepreneurship and performance in terms of profitability and growth, with a distinction in more positive and significant relationships of innovativeness items to performance than the impact of other elements on performance in Slovenia, while in Romania we may find a more balanced impact of different corporate entrepreneurship elements on performance. This research forms the basis of the following hypotheses:

*HYPOTHESIS 1: The extent of corporate entrepreneurship (new businesses, new ventures, product/service innovation) will be positively related to organizational performance in terms of growth and profitability in Slovenia and Romania.*

*HYPOTHESIS 2: Positive and significant relationships of corporate entrepreneurship to performance will have the following properties: (2a) product/service innovation will be the most important among corporate entrepreneurship elements in Slovenia, and (2b) the importance of new businesses, new ventures, and product/service innovation will be balanced in Romania.*

#### ALLIANCE ELEMENTS AND CORPORATE ENTREPRENEURSHIP

Inter-organizational relationships have received limited research attention in the context of corporate entrepreneurship (Antoncic 1999). Firms participate in alliances in order to learn know-how and

capabilities from their alliance partners (Kale et al. 2000). Inter-firm elements that reside in networks and strategic alliances and can be beneficial for corporate entrepreneurship, as conceptually elaborated by Antoncic (2001), are: inter-firm communication, trust, external-relationship oriented support, value congruence, and the number of external relationships. First, the frequency and quality of inter-firm communication can have a positive impact on corporate entrepreneurship. Past research that supports this notion has emphasized the following: face-to-face interaction (Saxenian 1991), communication quality and participation (Mohr and Spekman 1994), information sharing (Jones et al. 1997; Uzzi 1997), open and prompt communication (Das and Teng 1998), and frequency of communication (Deeds and Hill 1998). Second, inter-firm trust can have a positive impact on corporate entrepreneurship. Past research has stressed the importance of trust in alliances (Pruitt 1981; Parkhe 1993; Das and Teng 1998; Weaver and Dickson 1998) and networks (Saxenian 1991). Third, the inter-firm level organizational support can be seen as a crucial element for corporate entrepreneurship. The support elements can be found in discussions about: commitment in inter-firm relationships (Porter et al. 1974; Mohr and Spekman 1994) and permeability of network boundaries (Jones et al. 1997). Fourth, congruence of organizational values across alliance or network partner firms can be an important predictor of corporate entrepreneurship development. Values in general can serve as social control mechanisms that encourage desirable behavior in alliances (Das and Teng 1998), sharing values can improve alliance success (Parkhe 1991), and, in addition, values can even be a byproduct of joint networking (Jones et al. 1997). Fifth, the number of inter-firm relationships of a firm can have a positive impact on corporate entrepreneurship development, particularly on product innovation (Saxenian 1991; Deeds and Hill 1996; 1998; Powell et al. 1996), as well as on corporate entrepreneurship as a construct (Antoncic and Hisrich 2004).

**HYPOTHESIS 3:** *The extent of alliance elements (communication, trust, support, value congruence, number of alliances) will be positively related to corporate entrepreneurship in terms of new businesses, new ventures, and product/service innovation in Slovenia and Romania.*

## **Methods**

The methodology will be discussed in terms of measurement instrument, data collection, samples, and data analysis.

#### MEASUREMENT INSTRUMENT

In this research, corporate entrepreneurship, alliance characteristics, and performance elements were measured mostly through scales previously tested and used by other researchers. The questionnaire was initially prepared in English and then translated into Slovenian and Romanian. Perceptual measures were selected based on their congruence with the concepts under examination. Five point scales (Likert-type scales and semantic differentials) were used to keep the questionnaire as simple as possible. In some cases longer scales were needed to capture the information. Companies reported answers for the past three-year period.

Corporate entrepreneurship was measured by selected items of new businesses, new ventures, and product/service innovation (see table 1) from the corporate entrepreneurship scale used by Antoncic and Hisrich (2004). The number of alliances was measured as the number of strategic alliances of the focal firm (Antoncic and Hisrich 2004) and was assessed across different alliance types: customer-supplier relationships, licensing, technology sharing, joint development, and equity joint ventures (Mowery et al. 1996), and at the overall level.

Dependent variables – performance – were measured in terms of growth and profitability in absolute and relative terms (Antoncic and Hisrich 2001): absolute growth items are the average annual growth in number of employees in the last three years and the average annual growth in sales in the last three years, while the relative growth item is growth in market share (Chandler and Hanks 1993) in the last three years; absolute profitability items are average annual return on sales (ROS), average return on assets (ROA), and average annual return on equity (ROE), in the last three years, while relative profitability items are a subjective measure of firm performance relative to competitors (Chandler and Hanks 1993) and its extension (Antoncic and Hisrich 2001; 2004): the company's profitability in comparison to all competitors, as well as to competitors that are at about the same age and stage of development. Control variables included firm age, size, and industry.

#### DATA COLLECTION, SAMPLES, AND DATA ANALYSIS

Questionnaire data were collected from top executives of selected firms in Slovenia and Romania. For analysis 477 usable responses were obtained from Slovenia (a representative random sample) and 30 responses were obtained from Romania.

The average firm in the Slovenian sample had 100 to 249 employ-

ees (full time equivalent), had \$5 Million to up to \$10 Million sales, was 21 to 50 years old, and operated in manufacturing, trade and services sectors. The average firm in the Romanian sample had 50 to 99 employees (full time equivalent), had \$1 Million to up to \$5 Million sales, was 11 to 20 years old, and operated in trade, services, and manufacturing sectors. In both countries also other industries were well represented. The samples were not ideally matched, but past research (Antoncic and Hisrich 2000; 2001; 2004) mostly confirmed the stability of corporate entrepreneurship models across control variables.

Data were analyzed by using the SPSS statistical analytical software. Item means were compared in absolute and statistical terms (Kolmogorov-Smirnov test). The hypotheses were tested with the analysis of correlations. These simple analytical methods were used because of the small size of the Romanian sample.

### Findings

Research findings will be discussed in terms of comparisons of corporate entrepreneurship and alliance mean values between Slovenia and Romania, and hypotheses testing findings on corporate entrepreneurship–performance and alliance–corporate entrepreneurship relationships.

#### COMPARISONS OF MEANS

Means for all corporate entrepreneurship and alliance items are shown in table 1. Most differences in item means were found not to be statistically significant (at 0.05 levels). Significant differences were found only for few items: only one among 17 corporate entrepreneurship items (the number of products introduced by the company lower in Slovenia – mean 2.65 – than in Romania – mean 3.40); three among 28 alliance items (the congruence of organizational values was found higher in Romania than in Slovenia for two items: in technology sharing – Slovenia 2.64, Romania 3.80 – and in joint development – Slovenia 2.58, Romania 3.50; the number of strategic alliances in the equity joint ventures type was found higher in Slovenia than in Romania: mean value 1.91 is close to one alliance of this type in Slovenia and mean 1.13 is close to zero alliances in Romania).

#### CORPORATE ENTREPRENEURSHIP–PERFORMANCE RELATIONSHIPS

Hypothesis 1 predicted a positive relationship between corporate entrepreneurship and performance. Correlations for the Slovenian



TABLE 1 Mean comparisons between Slovenia and Romania

Questionnaire item	Dimension	Code	Slovenia		Romania	
			(1)	(2)	(1)	(2)
Stimulating your new demand on your existing products in your current markets through aggressive advertising and marketing	New businesses	I1NB01	2.71	0.05	2.97	0.24
Broadening your business lines in your current industries	New businesses	I1NB02	3.13	0.05	3.50	0.20
Pursuing new businesses in new industries that are related to your current business	New businesses	I1NB03	3.14	0.05	2.83	0.24
Finding new niches for your products in your current markets	New businesses	I1NB04	3.50	0.05	3.07	0.21
Entering new businesses by offering new lines and products	New businesses	I1NB05	3.00	0.06	2.80	0.22
Creating new semi-autonomous units	New ventures	I1NB06	2.24	0.05	2.47	0.25
Creating new autonomous units	New ventures	I1NB07	1.97	0.05	2.07	0.22
Creating new firms	New ventures	I1NB08	1.84	0.05	1.97	0.26
Creating new totally independent firms	New ventures	I1NB09	1.44	0.04	1.50	0.20
Your company's emphasis on developing new products	Product/service innovation	I2PI01	3.45	0.05	3.40	0.19
Rate of new product introduction into the market	Product/service innovation	I2PI02	3.16	0.04	3.20	0.20
Your company's spending on new product development activities	Product/service innovation	I2PI03	3.20	0.05	3.17	0.21
The number of new products added by your company	Product/service innovation	I2PI04	3.22	0.04	3.27	0.23
The number of new products introduced by your company	Product/service innovation	I2PI05	2.65	0.05	3.40	0.21*
Please estimate the percent of the company's revenue generated from products that did not exist three years earlier (1 = 0–9% ... 7 = 70% or more)	Product/service innovation	I2PI05	2.65	0.05	3.40	0.21
How many new lines of products or services has your firm marketed in last three years (5 = very many new lines of products or services)	Product/service innovation	I2PI06	3.11	0.08	3.53	0.36
How many new lines of products or services has your firm marketed in last three years (5 = changes in product or service lines have usually been quite dramatic)	Product/service innovation	I2PI07	3.03	0.05	2.79	0.21



Please rate the extent of communication with your strategic alliance partners in general in last three years (R; 1 = timely)	N1C001	2.34	0.04	2.42	0.22
Please rate the extent of communication with your strategic alliance partners in general in last three years (R; 1 = accurate)	N1C002	2.49	0.04	2.38	0.22
Please rate the extent of communication with your strategic alliance partners in general in last three years (R; 1 = adequate)	N1C003	2.57	0.04	2.35	0.25
Please rate the extent of communication with your strategic alliance partners in general in last three years (R; 1 = complete)	N1C004	2.78	0.03	2.62	0.24
Please rate the extent of communication with your strategic alliance partners in general in last three years (R; 1 = credible)	N1C005	2.34	0.04	2.38	0.21
Please rate the extent of communication with your strategic alliance partners in general in last three years (R; 1 = frequent)	N1C006	2.53	0.04	2.62	0.20
Please rate the extent of communication with your strategic alliance partners in general in last three years (R; 1 = high quality)	N1C007	2.63	0.04	2.46	0.19
We trust that the alliance partners' decisions will be beneficial to our business	N2TR01	3.34	0.04	3.62	0.19
We feel that we do not get fair deals from our alliance partners (R)	N2TR02	2.38	0.04	2.38	0.22
Relationships with our alliance partners are marked by a high degree of harmony	N2TR03	3.19	0.04	3.19	0.22
Our alliance partners provide us with a truthful picture of their businesses	N2TR04	3.09	0.04	3.00	0.22
Our alliance partners carry out duties even if we do not check up on them	N2TR05	3.14	0.04	3.00	0.24
Our alliance partners have sometimes promised to do things without actually doing them later (R)	N2TR06	2.97	0.05	2.85	0.24
The management structure itself encourages employees to believe that collaboration with partner companies is part of the role set for all members of the organization	N3ES01	3.34	0.05	3.60	0.23
Rewards and reinforcement enhance the motivation of individuals to collaborate with partner companies	N3ES02	3.09	0.05	3.13	0.23

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Boundaries (real and imagined) that prevent people from looking at problems outside our company do not exist	Alliance support	N3ES03	3.01	0.05	3.07	0.22
Our company has a minimal commitment to strategic alliance partners (R)	Alliance support	N3ES04	2.88	0.05	2.75	0.26
Please rate the level of congruence of organizational values between your company and your alliance partners by alliance type (customer-supplier relationships)	Alliance value congruence	N4VC01	3.48	0.04	3.92	0.16
Please rate the level of congruence of organizational values between your company and your alliance partners by alliance type (licensing)	Alliance value congruence	N4VC02	2.27	0.06	3.36	0.28
Please rate the level of congruence of organizational values between your company and your alliance partners by alliance type (technology sharing)	Alliance value congruence	N4VC03	2.64	0.05	3.80	0.29*
Please rate the level of congruence of organizational values between your company and your alliance partners by alliance type (joint development)	Alliance value congruence	N4VC04	2.58	0.06	3.50	0.15*
Please rate the level of congruence of organizational values between your company and your alliance partners by alliance type (equity joint ventures)	Alliance value congruence	N4VC05	2.26	0.06	3.50	0.65
Please estimate the overall number of strategic alliances of your company with other companies in last three years	Alliance number	N5DE01	3.89	0.08	4.77	0.43
Please estimate the number of strategic alliances in last three years by the following alliance types (customer-supplier relationships)	Alliance number	N5DE02	4.56	0.09	4.38	0.43
Please estimate the number of strategic alliances in last three years by the following alliance types (licensing)	Alliance number	N5DE03	1.69	0.06	1.79	0.22
Please estimate the number of strategic alliances in last three years by the following alliance types (technology sharing)	Alliance number	N5DE04	2.38	0.07	2.03	0.34
Please estimate the number of strategic alliances in last three years by the following alliance types (joint development)	Alliance number	N5DE05	2.28	0.07	1.87	0.25
Please estimate the number of strategic alliances in last three years by the following alliance types (equity joint ventures)	Alliance number	N5DE06	1.91	0.06	1.13	0.08*

NOTES Column headings are as follows: (1) mean, (2) standard error. \* Difference is significant at the 0.05 level.

sample are shown in table 2. The majority of correlations between corporate entrepreneurship and growth items (44 out of 51 correlations, 86%) and corporate entrepreneurship and profitability items (60 out of 85 correlations, 71%) were found positive and significant. For one item – creating new totally independent firms – no significant relationship to profitability was found.

Correlations for the Romanian sample are shown in table 3. Corporate entrepreneurship and growth items were found not to be predominantly significantly correlated (31 out of 51 correlations were not significant, 61%), but three corporate entrepreneurship items (broadening business lines in current industries, the percent of company revenue generated from newer products, dramatic changes in lines of products or services) stand out with strong and positive relationships to all growth items. Similar results were found for correlations between corporate entrepreneurship and profitability items (65 out of 85 correlations were not significant, 76%), but with two items strongly correlated to absolute profitability (broadening business lines in current industries, the percent of company revenue generated from newer products) and two items with strong correlation to relative profitability (broadening business lines in current industries, marketing of many new lines of products or services).

However, when we move over the significance levels and look at the coefficient size, we can see that the results are not that different between the two samples. For instance, many correlations below 0.2 values are significant for the Slovenian sample, while many correlations above 0.2 are not significant in the Romanian sample. This is due to the difference in sample sizes and measurement items' coding properties. Overall, Hypothesis 1 received mixed support.

Hypothesis 2 postulated that product/service innovation may be the most important in the relationship to performance in Slovenia, while the relationship to performance of new businesses, new ventures, and product/service innovation may be balanced in Romania. Significant correlations to growth in Slovenia were found as follows (see table 2): new businesses – 9 out of 15, 60%; new ventures – 12 out of 12, 100%; product/service innovation – 23 out of 24, 96%. Significant correlations to profitability in Slovenia were found as follows: new businesses – 12 out of 25, 48%; new ventures – 11 out of 20, 55%; product/service innovation – 38 out of 40, 95%. These findings are in general in support of Hypothesis 2a, with the notion that new venture formation is also very important for growth in Slovenia.

In Romania, significant correlations to growth were found as follows (see table 3): new businesses – 9 out of 15, 60%; new ventures –

TABLE 2 Pearson correlation coefficients between corporate entrepreneurship and performance items: Slovenia

Code	Performance items									
	P1GR01	P1GR02	P1GR03	P2PR01	P2PR02	P2PR03	P2PR04	P2PR05		
I1NB01	.085	.161**	.168**	.089	.067	.059	.142**	.154**		
I1NB02	.079	.168**	.198**	.147**	.178**	.165**	.153**	.181**		
I1NB03	.075	.143**	.217**	.075	.117*	.083	.019	.042		
I1NB04	.016	.089	.129**	.085	.091	.050	.056	.097*		
I1NB05	.118*	.202**	.229**	.130**	.106*	.098*	.066	.086		
I1NB06	.163**	.171**	.194**	.075	.083	.082	.137**	.150**		
I1NB07	.188**	.203**	.167**	.108*	.106*	.096*	.091	.120*		
I1NB08	.092*	.179**	.120**	.137**	.150**	.158**	.144**	.139**		
I1NB09	.137**	.135**	.105*	.038	.043	.027	.032	.063		
I2PI01	.088	.190**	.243**	.148**	.167**	.157**	.157**	.151**		
I2PI02	.113*	.193**	.203**	.148**	.177**	.189**	.185**	.177**		
I2PI03	.103*	.134**	.181**	.088	.139**	.149**	.089	.110*		
I2PI04	.122**	.164**	.217**	.148**	.168**	.197**	.139**	.139**		
I2PI05	.103*	.144**	.197**	.153**	.166**	.146**	.132**	.132**		
I2PI06	.301**	.340**	.312**	.215**	.235**	.216**	.151**	.175**		
I2PI07	.209**	.242**	.277**	.270**	.263**	.240**	.104*	.147**		
I2PI08	.175**	.209**	.253**	.238**	.261**	.260**	.137**	.194**		

NOTES \*Correlation is significant at the .05 level (2-tailed). \*\*Correlation is significant at the .01 level (2-tailed).

PERFORMANCE ITEMS P1GR01 – average annual growth in number of employees in last three years; P1GR02 – average annual growth in sales in last three years; P1GR03 – growth in market share in last three years; P2PR01 – average annual return on sales in last three years; P2PR02 – average annual return on assets in last three years; P2PR03 – average annual return on equity in last three years; P2PR04 – profitability of your company in last three years in comparison to all competitors that you are aware of; P2PR05 – profitability of your company in last three years in comparison to competitors at about same age and stage of development.

TABLE 3 Pearson correlation coefficients between corporate entrepreneurship and performance items: Romania

Code	Performance items									
	P1GR01	P1GR02	P1GR03	P2PR01	P2PR02	P2PR03	P2PR04	P2PR05		
I1NB01	.272	.212	.404*	.260	.221	.256	.051	.119		
I1NB02	.470**	.413*	.600**	.430*	.579**	.578**	.350	.407*		
I1NB03	.471**	.351	.453*	.253	.177	.232	-.057	.158		
I1NB04	.177	.529**	.406*	.265	.294	.291	.163	.258		
I1NB05	.021	.343	.378*	.361*	.304	.311	.195	.305		
I1NB06	.091	.267	.137	.158	-.033	-.032	.296	.405*		
I1NB07	-.126	.039	-.104	.142	-.016	-.018	.270	.145		
I1NB08	.089	-.139	-.064	.014	-.126	-.140	-.031	-.182		
I1NB09	.024	-.048	-.026	.037	.062	.062	-.078	-.024		
I2PI01	.097	.290	.384*	.250	.231	.171	.369*	.340		
I2PI02	.138	.185	.348	.347	.312	.284	.525**	.530**		
I2PI03	.258	.336	.413*	.183	.138	.113	.317	.411*		
I2PI04	.121	.280	.360	.418*	.257	.229	.245	.308		
I2PI05	.379*	.321	.475**	.415*	.388*	.353	.310	.404*		
I2PI06	.621**	.643**	.664**	.540**	.591**	.590**	.198	.379*		
I2PI07	.269	.157	.460*	.336	.352	.360	.388*	.436*		
I2PI08	.368*	.407*	.517**	.343	.285	.243	.198	.316		

NOTES \*Correlation is significant at the .05 level (2-tailed). \*\*Correlation is significant at the .01 level (2-tailed).

PERFORMANCE ITEMS P1GR01 – average annual growth in number of employees in last three years; P1GR02 – average annual growth in sales in last three years; P1GR03 – growth in market share in last three years; P2PR01 – average annual return on sales in last three years; P2PR02 – average annual return on assets in last three years; P2PR03 – average annual return on equity in last three years; P2PR04 – profitability of your company in last three years in comparison to all competitors that you are aware of; P2PR05 – profitability of your company in last three years in comparison to competitors at about same age and stage of development.

TABLE 4 Pearson correlation coefficients between alliance and new businesses/ventures items: Slovenia

Code	I1NB01	I1NB02	I1NB03	I1NB04	I1NB05	I1NB06	I1NB07	I1NB08	I1NB09
N1C001	-.178**	-.116*	-.010	-.122**	-.081	-.064	.014	.000	.045
N1C002	-.166**	-.106*	-.058	-.115*	-.098*	-.056	.015	.024	.036
N1C003	-.109*	-.065	-.067	-.064	-.055	-.061	.019	.041	.046
N1C004	-.047	.003	-.007	-.040	-.093*	-.040	.007	-.011	.031
N1C005	-.104*	-.040	-.010	-.042	-.009	-.014	.059	.029	.110*
N1C006	-.161**	-.118*	-.033	-.125**	-.047	-.026	.045	.064	.101*
N1C007	-.137**	-.063	-.038	-.098*	-.034	-.071	.017	.038	.043
N2TR01	.143**	.174**	.116*	.194**	.179**	.105*	.030	.094*	.029
N2TR02	-.063	-.048	-.014	-.014	-.120*	-.073	.000	.030	.116*
N2TR03	.119*	.131**	.029	.104*	.173**	.154**	.118*	.076	-.001
N2TR04	.098*	.070	.040	.045	.091	.083	.112*	.120**	-.009
N2TR05	.156**	.128**	.036	.024	.072	.065	.025	.126**	.009
N2TR06	.006	-.007	-.028	.032	-.031	.029	.036	.009	.037
N3ES01	.184**	.194**	.132**	.150**	.090	.181**	.137**	.101*	.051
N3ES02	.220**	.197**	.192**	.212**	.175**	.160**	.136**	.078	.058
N3ES03	.032	.003	.025	.039	-.027	.105*	.169**	.118*	.126**
N3ES04	-.009	-.109*	-.078	-.082	-.081	-.053	-.003	-.030	.036
N4VC01	.134**	.203**	.161**	.248**	.145**	.045	.012	.074	.026
N4VC02	.215**	.219**	.093	.097	.089	.130*	.162**	.245**	.168**
N4VC03	.206**	.205**	.121*	.106*	.154**	.172**	.161**	.230**	.094
N4VC04	.205**	.258**	.136**	.124*	.165**	.173**	.120*	.207**	.075
N4VC05	.202**	.201**	.055	.106*	.106*	.212**	.139**	.278**	.135**
N5DE01	.177**	.188**	.227**	.143**	.157**	.157**	.127**	.106*	.122**
N5DE02	.151**	.141**	.212**	.138**	.193**	.118*	.146**	.065	.100*

N5DE03	.137**	.107*	.064	.039	.107*	.146**	.187**	.180**	.224**
N5DE04	.136**	.163**	.142**	.148**	.144**	.185**	.179**	.125**	.100*
N5DE05	.123**	.190**	.146**	.103*	.151**	.148**	.171**	.163**	.148**
N5DE06	.096*	.096*	.054	.042	.083	.191**	.190**	.258**	.187**

NOTES \*Correlation is significant at the .05 level (2-tailed). \*\*Correlation is significant at the .01 level (2-tailed).

TABLE 5 Pearson correlation coefficients between alliance and product/service innovation items: Slovenia

Code	I2PI01	I2PI02	I2PI03	I2PI04	I2PI05	I2PI06	I2PI07	I2PI08
N1C001	-.155**	-.123**	-.120**	-.116*	-.088	-.075	-.148**	-.167**
N1C002	-.142**	-.106*	-.131**	-.115*	-.064	-.090	-.097*	-.173**
N1C003	-.073	-.083	-.126**	-.065	-.055	-.034	-.028	-.102*
N1C004	-.109*	-.066	-.161**	-.074	-.098*	-.024	-.059	-.169**
N1C005	-.066	-.070	-.134**	-.106*	-.076	.026	-.054	-.100*
N1C006	-.107*	-.147**	-.149**	-.116*	-.101*	-.060	-.085	-.118*
N1C007	-.111*	-.124**	-.234**	-.117*	-.166**	-.050	-.089	-.134**
N2TR01	.155**	.195**	.099*	.138**	.104*	.163**	.216**	.260**
N2TR02	-.131**	-.148**	-.151**	-.180**	-.127**	-.164**	-.100*	-.114*
N2TR03	.178**	.166**	.127**	.128**	.078	.161**	.144**	.184**
N2TR04	.039	.114*	.074	.060	.077	.026	.089	.104*
N2TR05	.117*	.162**	.052	.124**	.119*	.146**	.152**	.139**
N2TR06	-.062	-.071	-.075	-.074	-.080	-.060	-.073	-.090
N3ES01	.183**	.123**	.163**	.124**	.107*	.101*	.162**	.207**
N3ES02	.182**	.117*	.199**	.112*	.134**	.169**	.125**	.218**
N3ES03	.025	-.020	.053	-.025	.019	.020	.043	.087

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N4VC01	.186**	.200**	.245**	.195**	.116*	.172**	.214**	.217**
N4VC02	.045	.100	.109*	.153**	.213**	.124*	.163**	.101
N4VC03	.161**	.108*	.197**	.159**	.221**	.139**	.213**	.136**
N4VC04	.185**	.119*	.237**	.146**	.260**	.141**	.152**	.232**
N4VC05	.138**	.084	.190**	.136**	.247**	.121*	.143**	.127*
N5DE01	.216**	.219**	.183**	.169**	.168**	.145**	.157**	.224**
N5DE02	.158**	.204**	.120*	.118*	.178**	.181**	.174**	.231**
N5DE03	-.005	.062	.036	.015	.125**	.202**	.138**	.114*
N5DE04	.159**	.123**	.135**	.130**	.164**	.178**	.182**	.172**
N5DE05	.158**	.163**	.162**	.160**	.218**	.212**	.168**	.218**
N5DE06	.022	.014	.052	.030	.125**	.156**	.062	.081

NOTES \*Correlation is significant at the .05 level (2-tailed). \*\*Correlation is significant at the .01 level (2-tailed).

TABLE 6 Pearson correlation coefficients between alliance and new businesses/ventures items: Romania

Code	I1NB01	I1NB02	I1NB03	I1NB04	I1NB05	I1NB06	I1NB07	I1NB08	I1NB09
N1C001	.016	.214	.184	-.059	.236	.075	.137	.125	.480*
N1C002	.073	.198	.424*	.072	.230	.112	.198	.103	.467*
N1C003	-.008	.072	.273	-.019	.137	.086	.277	.112	.532**
N1C004	.034	.264	.364	-.093	.120	-.009	.170	-.005	.380
N1C005	.104	.410*	.355	.008	.307	.090	.236	.031	.417*
N1C006	.041	.283	.180	-.008	.288	.072	.238	.046	.425*
N1C007	.140	.439*	.326	.039	.380	.269	.317	.083	.409*
N2TR01	-.081	.037	.007	-.044	.374	.132	.080	.266	-.058
N2TR02	-.279	-.032	.098	-.087	.223	.109	.221	.076	.267
N2TR03	.076	-.272	.193	.082	-.001	.092	-.209	.062	.041
N2TR04	.135	-.064	.078	-.063	-.065	-.124	-.262	-.118	.279

N2TR05	-.025	-.441*	.024	.000	-.207	.046	-.080	.065	.000
N2TR06	-.296	-.030	.234	.212	.455*	.181	.112	.116	.263
N3ES01	.140	.154	.329	.237	.218	.292	.179	.302	.385*
N3ES02	.065	.201	.435*	.041	.173	.042	-.141	.362*	.150
N3ES03	.090	-.160	.007	.022	-.274	-.289	-.027	-.180	.000
N3ES04	-.016	-.333	-.151	-.226	-.367	-.043	.000	-.018	.012
N4VC01	-.041	-.211	.123	.274	.244	.242	.255	.113	.152
N4VC02	.086	.053	-.607*	-.461	-.345	-.228	.489	-.298	-.404
N4VC03	-.157	.124	-.440	.135	.355	.000	-.022	.017	-.058
N4VC04	-.064	-.290	.000	-.097	-.329	-.116	-.271	.212	.374
N4VC05	-.378	-.258	-.103	.086	-.775	-.614	-.405	-.939	-.775
N5DE01	.299	.155	.453*	.095	-.029	-.018	-.188	-.084	.034
N5DE02	.260	-.001	.356	.078	-.128	-.064	-.170	-.043	.102
N5DE03	.104	.065	.323	-.032	.265	.195	-.083	-.077	.075
N5DE04	.158	.165	.336	-.083	.126	.075	-.110	-.157	.043
N5DE05	.095	-.095	.404*	.028	.130	.071	-.121	.051	.095
N5DE06	.130	.296	.099	-.019	-.013	-.050	.115	.007	.000

NOTES \*Correlation is significant at the .05 level (2-tailed). \*\*Correlation is significant at the .01 level (2-tailed).

TABLE 7 Pearson correlation coefficients between alliance and product/service innovation items: Romania

Code	I2PI01	I2PI02	I2PI03	I2PI04	I2PI05	I2PI06	I2PI07	I2PI08
N1C001	.385	.059	.257	.136	.281	.128	.210	.230
N1C002	.432*	-.060	.354	.171	.114	.161	.124	.330
N1C003	.416*	.007	.336	.226	.084	.216	.104	.261
N1C004	.535**	.220	.372	.378	.248	.317	.235	.223

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N1C005	.555**	.229	.433*	.430*	.357	.413*	.408*
N1C006	.573**	.266	.449*	.299	.145	.085	.131
N1C007	.415*	.128	.393*	.333	.415*	.228	.433*
N2TR01	.133	-.142	.000	.278	.172	.230	.388*
N2TR02	.218	-.300	.031	-.036	-.023	-.192	.007
N2TR03	.009	.031	-.125	.044	-.066	.001	.019
N2TR04	-.100	.061	-.188	-.176	.000	.000	-.188
N2TR05	-.276	-.306	-.373	-.404*	-.214	-.204	-.259
N2TR06	.322	-.147	.173	.073	-.001	-.146	.328
N3ES01	.501**	.464**	.422*	.410*	.407*	.507**	.513**
N3ES02	.478**	.226	.466**	.363*	.282	.406*	.586**
N3ES03	-.216	-.141	-.081	-.149	-.073	-.282	-.368*
N3ES04	-.118	-.185	.067	-.236	-.261	-.213	-.189
N4VC01	.085	-.027	.042	.035	.013	.145	.160
N4VC02	-.459	-.086	-.141	-.038	.073	-.045	-.310
N4VC03	.251	.249	.466	.433	.280	-.065	.256
N4VC04	-.354	-.267	-.420	-.412	-.297	-.408	-.374
N4VC05	-.316	.894	-.674	-.800	.000	-.756	-.602
N5DE01	.025	.178	-.146	.062	.420*	.352	.188
N5DE02	-.097	.094	-.246	-.075	.310	.238	.018
N5DE03	.182	.086	.100	.141	.221	.358	.280
N5DE04	.335	.218	.204	.175	.257	.320	.237
N5DE05	.260	-.028	.079	.081	.104	.288	.396*
N5DE06	.260	.160	.225	.098	.273	-.073	.207

NOTES \*Correlation is significant at the .05 level (2-tailed). \*\*Correlation is significant at the .01 level (2-tailed).

0 out of 12, 0%; product/service innovation – 11 out of 24, 46%. Significant correlations to profitability in Slovenia were found as follows: new businesses – 5 out of 25, 20%; new ventures – 1 out of 20, 5%; product/service innovation – 15 out of 40, 37%. These findings are not in support of Hypothesis 2b. New businesses and product/service innovation can be considered important for growth, and product/service innovation can be important for profitability in Romania.

#### ALLIANCE–CORPORATE ENTREPRENEURSHIP RELATIONSHIPS

Hypothesis 3 predicted that the extent of alliance elements (communication, trust, support, value congruence, number of alliances) would be positively related to corporate entrepreneurship. Correlations for the Slovenian sample are shown in tables 4 and 5. Significant correlations in the proposed direction were found as follows: for the alliance–new businesses relationship – 15 out of 35 (43%) for alliance communication items, 13 out of 30 (43%) for alliance trust items, 9 out of 20 (45%) for alliance support items, 21 out of 25 (84%) for value congruence items, 25 out of 30 (83%) for alliance number items; for the alliance–new ventures relationship – 2 out of 28 (7%) for alliance communication items, 8 out of 24 (33%) for alliance trust items, 9 out of 16 (56%) for alliance support items, 14 out of 20 (70%) for value congruence items, 23 out of 24 (96%) for alliance number items; for the alliance–product/service innovation relationship – 33 out of 56 (59%) for alliance communication items, 31 out of 48 (65%) for alliance trust items, 24 out of 32 (75%) for alliance support items, 21 out of 25 (84%) for shared values items, 38 out of 48 (79%) for alliance number items.

Correlations for the Romanian sample are shown in tables 6 and 7. Significant correlations in the proposed direction were found as follows: for the alliance–new businesses relationship – 0 out of 35 (0%) for alliance communication items, 0 out of 30 (0%) for alliance trust items, 1 out of 20 (5%) for alliance support items, 0 out of 25 (0%) for value congruence items, 2 out of 30 (7%) for alliance number items; for the alliance–new ventures relationship – 0 out of 28 (0%) for alliance communication items, 0 out of 24 (0%) for alliance trust items, 2 out of 16 (12%) for alliance support items, 0 out of 20 (0%) for shared values items, 0 out of 24 (0%) for alliance number items; for the alliance–product/service innovation relationship – 0 out of 56 (0%) for alliance communication items, 1 out of 48 (2%) for alliance trust items, 12 out of 32 (75%) for alliance support items, 0 out of 25 (0%) for shared values items, 3 out of 48 (6%) for alliance number

items. The results based on the Romanian sample should be inferred with caution because of the low number of responses.

Overall, Hypothesis 3 did not receive enough support. Some findings were supportive only for Slovenia, particularly between alliances (value congruence and number) and new businesses, between alliances (support, value congruence, and number) and new ventures, and between alliances (communication, trust, support, value congruence, and number) and product/service innovation.

### **Discussion and Conclusion**

This study provided some new evidence on the relationship between corporate entrepreneurship and performance, as well as alliance characteristics and corporate entrepreneurship in two countries – Slovenia and Romania. The analysis indicated very minor differences in corporate entrepreneurship and alliance item means between the two countries. This similarity in levels of corporate entrepreneurship and alliance characteristics may be due to the fact that the transition to the market-based economy has followed similar paths in past the two decades (democracy, private ownership, competition, efforts to join the EU, etc.). Even though the overall hypothesis on the relationship between corporate entrepreneurship received mixed support, we are confident that recommendations for Slovenia from past research (Antončič and Hisrich 2000; Douglas et al. 2003) can be equally or even more relevant for Romania: increase corporate entrepreneurship in order to increase firm performance in terms of growth and profitability.

We discovered that in Slovenia innovation in products and services represents a driving force for improvements in growth and profitability of firms, with the addition that new venture formation can be also important for growth. In Romania, on the other hand, new businesses and product/service innovation can be very important for growth of firms, while product/service innovation can be related to profitability. Therefore, innovation in products and services can be considered a crucial element in the performance of firms and consequently in the economic growth of the two countries. Development of an innovation friendly environment should become a top priority of practitioners and policy makers in Slovenia and Romania, and probably also in other countries that have followed similar paths of economic development.

The study provided also some insights on the relationship between alliance characteristics and corporate entrepreneurship. On the basis of the findings for Slovenia, we can claim that firms can achieve

beneficial results in their product and service innovation activities by taking good care of their strategic alliance relationships, which includes: developing a good communication with alliance partners; developing trust between partners; supporting collaboration activities with appropriate encouragements, commitments, structures, and rewards; developing value congruence between partners; and entering a higher number of strategic alliances.

The study has some limitations. Measures were based on perceptions of managers. The Romanian sample was small, so only limited analysis techniques could be used and the results based on the Romanian sample need to be inferred with caution. The study was limited to item by item correlation analysis that resulted in rather small correlation coefficients. Testing relationships between constructs by using structural equation modelling would provide better results. The study was conducted in two countries; future research may further validate the results of this study in other countries. Despite the limitations, we believe we have provided some interesting evidence on the relationship between corporate entrepreneurship and performance and on the relationship between alliance characteristics and corporate entrepreneurship.

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